

SEQUENCE LISTING

<110> ADViSYS

<120> GROWTH HORMONE RELEASING HORMONE ("GHRH") TREATMENT DECREASES CULLING IN HERD ANIMALS

<130> 108328.00170 - AVSI-0033

<160> 30

<170> PatentIn version 3.1

<210> 1

<211> 40

<212> PRT

<213> artificial sequence

<220>

<223> This is the amino acid sequenc for HV-GHRH.

<400> 1

His	Val	Asp	Ala	Ile	Phe	Thr	Asn	Ser	Tyr	Arg	Lys	Val	Leu	Ala	Gln
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Leu	Ser	Ala	Arg	Lys	Leu	Leu	Gln	Asp	Ile	Leu	Asn	Arg	Gln	Gln	Gly
			20					25					30		

Glu	Arg	Asn	Gln	Glu	Gln	Gly	Ala
		35					40

<210> 2

<211> 40

<212> PRT

<213> artificial sequence

<220>

<223> This is the amino acid sequenc for TI-GHRH.

<400> 2

Tyr	Ile	Asp	Ala	Ile	Phe	Thr	Asn	Ser	Tyr	Arg	Lys	Val	Leu	Ala	Gln
1				5					10					15	

Leu	Ser	Ala	Arg	Lys	Leu	Leu	Gln	Asp	Ile	Leu	Asn	Arg	Gln	Gln	Gly
			20					25					30		

Glu	Arg	Asn	Gln	Glu	Gln	Gly	Ala
		35					40

<210> 3

<211> 40

<212> PRT
 <213> artificial sequence

 <220>
 <223> This is the amino acid sequenc for TV-GHRH.

 <400> 3

 Tyr Val Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Ala Gln
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 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Leu Asn Arg Gln Gln Gly
 20 25 30

 Glu Arg Asn Gln Glu Gln Gly Ala
 35 40

 <210> 4
 <211> 40
 <212> PRT
 <213> artificial sequence

 <220>
 <223> This is the amino acid sequenc for 15/27/28-GHRH.

 <400> 4

 Tyr Ala Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Ala Gln
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 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Leu Asn Arg Gln Gln Gly
 20 25 30

 Glu Arg Asn Gln Glu Gln Gly Ala
 35 40

 <210> 5
 <211> 44
 <212> PRT
 <213> artificial sequence

 <220>
 <223> This is a consensus sequence for GHRH

 <400> 5

 Thr Ala Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Gly Gln
 1 5 10 15

 Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg Gln Gln Gly
 20 25 30

Glu Ser Asn Gln Glu Arg Gly Ala Arg Ala Arg Leu
 35 40

<210> 6
 <211> 40
 <212> PRT
 <213> artificial sequence

<220>
 <223> This is the artificial sequence for GHRH (1-40)OH.

<220>
 <221> MISC_FEATURE
 <222> (1)..(1)
 <223> Xaa at position 1 may be tyrosine, or histidine

<220>
 <221> MISC_FEATURE
 <222> (2)..(2)
 <223> Xaa at position 2 may be alanine, valine, or isoleucine.

<220>
 <221> MISC_FEATURE
 <222> (15)..(15)
 <223> Xaa at position 15 may be alanine, valine, or isoleucine.

<220>
 <221> MISC_FEATURE
 <222> (27)..(27)
 <223> Xaa at position 27 may be methionine, or leucine.

<220>
 <221> MISC_FEATURE
 <222> (28)..(28)
 <223> Xaa at position 28 may be serine or asparagine.

<220>
 <221> MISC_FEATURE
 <222> (34)..(34)
 <223> ARG may also be SER

<220>
 <221> MISC_FEATURE
 <222> (38)..(38)
 <223> Gln may also be Arg

<400> 6

Xaa Xaa Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Xaa Gln
 1 5 10 15

Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Xaa Xaa Arg Gln Gln Gly
 20 25 30

Glu Arg Asn Gln Glu Gln Gly Ala
 35 40

<210> 7
 <211> 323
 <212> DNA
 <213> artificial sequence

<220>
 <223> This is a nucleic acid sequence of a eukaryotic promoter c5-12.

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 aaaataactc ccgggagtta ttttttagagc ggaggaatgg tggacaccca aatatggcga 180
 cggttcctca cccgtcgcca tttttgggtg tccgccctcg gccggggccg cattcctggg 240
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 gctacccgga ggagcgggag gcg 323

<210> 8
 <211> 190
 <212> DNA
 <213> artificial sequence

<220>
 <223> Nucleic acid sequence of a hGH poly A tail.

<400> 8
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<210> 9
 <211> 219
 <212> DNA
 <213> artificial sequence

<220>
 <223> This is the cDNA for Porcine GHRH.

<400> 9

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taccggaagg tgctggccca gctgtccgcc cgcaagctgc tccaggacat cctgaacagg      180
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<210> 10
<211> 40
<212> PRT
<213> artificial sequence

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<220>
<223> This is the amino acid sequence for porcine GHRH.

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<400> 10

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Tyr Ala Asp Ala Ile Phe Thr Asn Ser Tyr Arg Lys Val Leu Gly Gln
1           5           10           15

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Leu Ser Ala Arg Lys Leu Leu Gln Asp Ile Met Ser Arg Gln Gln Gly
          20          25          30

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Glu Arg Asn Gln Glu Gln Gly Ala
          35          40

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<210> 11
<211> 3534
<212> DNA
<213> artificial sequence

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<220>
<223> This is the nucleic acid sequence for the operatively linked comp
       onents of the HV-GHRH plasmid.

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gtgaggaatg gtggggagtt attttttagag cggtgaggaa ggtgggcagg cagcaggtgt      180
tggcgctcta aaaataactc ccgggagtta ttttttagagc ggaggaatgg tggacacca      240
aatatggcga cggttctctca cccgtcgcca tatttggtg tccgccctcg gccggggccg      300
cattcctggg ggccgggcgg tgctcccgcc cgcctcgata aaaggctccg gggccggcgg      360
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<210> 12

<211> 3534

<212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the TI-GHRH plasmid.

<400> 12

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<210> 13

<211> 3534

<212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the TV-GHRH plasmid.

<400> 13

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3534

<210> 14

<211> 3534

<212> DNA

<213> artificial sequence

<220>

<223> Nucleic acid sequence for the 15/27/28 GHRH plasmid.

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 <211> 3534
 <212> DNA
 <213> artificial sequence

<220>
 <223> Plasmid sequence for wildtype GHRH.

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<210> 16
<211> 4260
<212> DNA
<213> Artificial sequence

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<220>
<223> Sequence for the pSP-SEAP cDNA construct.

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<211> 2710

<212> DNA
<213> artificial sequence

<220>

<223> Codon optimized ("GHRH") sequence for mouse.

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<210> 18
 <211> 2713
 <212> DNA
 <213> artificial sequence

<220>
 <223> Codon optimized ("GHRH") sequence for rat.

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gagttat	240
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ggaagggcga tcg	2713

<210> 19
 <211> 2716
 <212> DNA
 <213> artificial sequence

<220>
 <223> Codon optimized ("GHRH") sequence for bovine.

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gttggcgctc taaaaataac tcccgggagt tatttttaga gcggaggaat ggtggacacc	180
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<210> 20
 <211> 2716
 <212> DNA
 <213> artificial sequence

<220>
 <223> TCodon optimized ("GHRH") sequence for ovine.

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<210> 21

<211> 2713

<212> DNA

<213> artificial sequence

<220>

<223> Codon optimized ("GHRH") sequence for chicken.

<400> 21

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<220>
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<210> 23
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<220>
 <223> This is a NEO ribosomal binding site

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<210> 25
 <211> 29
 <212> DNA
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<220>
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<212> DNA

<213> artificial sequence

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<223> Codon optimized plasmid for GHRH expression.

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